

PRO-MAPP

Sustainability and Social Value Review

PRO-MAPP

PRO-MAPP is an integrated, tailorable and flexible data collection and clinical pathway platform. Created by merging surgeon experience, innovative software designers and clinical academics to develop a platform that is patient-centered and pathway tailored. The result is the delivery of timely solutions that support better patient outcomes with financial efficiencies for any specialty.

Climate change and the NHS

Climate change poses a major threat to public health. It is a critical issue impacting patients, staff, suppliers and the public. Healthcare has a central role to play in the shift to a lower carbon economy, and consequently the NHS is committed to being a proactive force in that transition, with sustainability as a cross-cutting theme throughout the organisation. All suppliers looking to work with the NHS must ensure their product, service or innovation supports the NHS's net zero commitments.

PRO-MAPP's Sustainability Review

As part of the evaluation framework, we have assessed PRO-MAPP in regard to its environmental benefits.

Travel and transport

Significant carbon emissions arise from patient, visitor and staff travel, c14% of the NHS's carbon footprint. PRO-MAPP will significantly reduce patient travel as it saves patients who are not medically complex coming to the hospital for their preoperative assessment. Over 70% of patients who are added to the waitlist for surgery and triaged in perioperative assessment clinic (POAC) are suitable for a telephone consultation after their first visit in clinic and do not need to come back to the hospital for further appointments. Unnecessary visits are also prevented as a result of reducing travel through combining appointments. Patients classified as medically complex, who require face-to-face appointment and Orthogeriatric POAC and/or Echo/Anaesthetic POAC only need to visit the hospital once for a combined appointment.

In the pilot studies so far, PRO-MAPP has saved **51,381.6km of travel**.¹ In the UK, average CO₂ emissions per car equates to 171 grams per km (according to the latest data from the [Department of Transport](#)). Furthermore, this equates to **8.8 tonnes** of CO₂ being saved. For comparison, 1 tonne of CO₂ is the equivalent of a return flight

¹ This was calculated through postcode assessment (25,690.8km were saved, x 2 for a round trip to and back from the hospital = 51,381.6km).

from Paris to New York; PRO-MAPP so far has saved the equivalent of almost nine return flights from Paris to New York.

Sustainable models of care

PRO-MAPP will be used in acute care, as some of the patients following the pathway will be acute admissions. Naturally, it will be a relatively small proportion of the overall number. By providing an alternative to NHS surgery interface systems, PRO-MAPP will enable new sustainable models of care. Through the new pathway, patients are now only staying an average of 6 days in the hospital, rather than an average 7.6 days through the previous pathway. There are many confounding factors when looking at changes in length of stay. A potential way by which PRO-MAPP could reduce the length of stay is improved preoperative medical optimisation and occupational therapy input. Acute care is one of the most carbon-intensive care pathways. The large carbon footprint is because acute care typically requires more medical equipment, protective equipment and other resources (125kg of CO₂e per day for hospitalised patients, and 76kg of CO₂e per outpatient acute care appointment—according to The Lancet Planetary Health). PRO-MAPP will consequently save c200kg of CO₂ per patient due to the reduction in the length of stay.

Through PRO-MAPP, there will also be a reduction in consultant time. On the standard pathway, the appointments are an hour slot for a 15-minute appointment, now with PRO-MAPP, the appointments are 15 minutes back-to-back. Consultants are consequently able to see three additional patients in the same time as the previous pathway, meaning a clinical resource reduction of between 50-75%. PRO-MAPP also allows better utilisation of resources by providing more personalised approach to the individual needs of patients enabling less qualified nursing staff to participate in the process of triaging patients creating more capacity for complex patients who require appointments with a perioperative assessment specialist band 6 nurse.

Lastly, as PRO-MAPP provides a more efficient and streamlined pathway, there are fewer cancellations/postponed surgeries due to optimisation early in the pathway.

Supply chain

The NHS's supply chain is their biggest source of carbon, responsible for c62% of their carbon footprint. Efforts to highlight lower carbon digital products and services that integrate sustainability throughout their business model are important. When PRO-MAPP was created, consideration has been taken to reduce the environmental impact of digital products, services and their associated supply chains; this has been used to inform procurement decision-making processes.

Digital transformation

PRO-MAPP focuses on digitally enabled care. It aims to provide a digital interface for seamless data entry from patient, staff and surgeon. Consequently, it supports the

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digitalisation of patient health records and aims to reduce the use of paper, printing and postage. Within PRO-MAPP, forms are not posted, as they are completed and returned whilst in clinic.

Medicines

Medicines are responsible for c25% of NHS's carbon footprint. Whilst PRO-MAPP will aim to ensure patients are seen more quickly and efficiently than the standard pathway, which may lead to less dependency on primary and secondary-level prescribing, we are not able to quantify the reduction in prescribing.

Sustainability stakeholder engagement

The net zero targets can only be delivered with collective action from all NHS staff and collaborative partnerships within and beyond the NHS. Consultation and engagement with both patients and staff throughout the development of PRO-MAPP will ensure benefits to the NHS's net zero ambitions are realised.

Green Business Operations

PRO-MAPP's UK hosting runs on 100% renewable energy holding with ISO 50001 certification. As a company we have a zero print and paper policy unless critical for legal or commercial reasons. We have run in this mode since inception and have a light touch environment impact policy as part of our ongoing business goals.

PRO-MAPP's Social Value Review

As part of the evaluation framework, we have assessed PRO-MAPP in regard to its social benefits.

Covid-19 recovery

On the new pre-operative pathway, patients are optimised early, reducing cancellations and surgery being postponed. Having enough patients who are fit for surgery reduces the burden on admin teams when identifying patients for theatres and increases their efficiency. A considerable proportion of patients on the waiting list are fit for surgery allowing Covid recovery operating lists to be populated at short notice enabling better utilisation of theatre capacity. Early identification and optimisation of complex patients also prevent delays in receiving final treatment.

Wellbeing of patients and staff

PRO-MAPP has received exceptionally positive feedback from patients; 92% of patients proposed the questionnaire was easy or very easy to complete, and their overall feedback was that the service was *excellent, efficient, supportive and thorough*. PRO-MAPP also allows for the development of nurses at all levels. Band 3 and 4 Nurses are able to take on new responsibilities and become more knowledgeable, and band 6 Nurses are able to work closely with the band 3 and 4 Nurses to share their knowledge, experience and expertise to deliver excellent care.

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